

XLII.—Description of a new *Helix* from Montpellier, and a new *Hydrobia* from Nice, with Observations on some varieties of the *Extra-marine Shells* of those districts. By JOHN PAGET, Esq.

Helix micropleuros.

Animal breve, supra-nigrescens, subtus albescens, semipellucidum; tentaculis superioribus griseo-nigrescentibus, crassiusculis et obtusis, inferioribus brevioribus et pallidis.

Testa minutissima, subdepressa, supra planiuscula, subtus convexa, costata, aperte umbilicata; apertura rotundato-lunata; peristomate recto, simplice, acuto; anfractibus 3—3½, convexiusculis, paulatim accrescentibus et sutura sat perspicua separatis, ultimo majore. Fusca, sericina.

Diam. 1½–2, long. 1 mill.

Hab. prope Montpellier.

This beautiful little *Helix* is nearly allied both to the *H. rupestris* and *H. pygmæa*. From the *H. rupestris* it is distinguished by its fewer convolutions, flatter shape, thinner shell and smaller size; from the *H. pygmæa* by its less convex whorls and shallower suture, by its last whorl sensibly larger than the rest, its larger mouth and somewhat larger size, and from both more especially by its epidermic ribs, which, although closer, are no less evident than those of the *H. costata* (Müller).

I found this *Helix* after heavy rain on the dead holly leaves on some waste ground, called the Bois de la Moures, about a quarter of a mile south of the high-road between Montpellier and Mauguio, in the south of France.

Hydrobia varica.

Animal elongatulum, fuscum, rostro probosciforme, tentaculis elongatulis griseo-cærulescentibus et pellucidibus, disco obtuso, griseo-cærulescente.

Testa minutissima, conoideo-ventricosa, vix perforata, tenuissime striata, in ultimo anfractu gibbosa; apertura ovato-pyriformi, obliqua, ad summum obtuse angulata, peristomate subreflexo et acuto; anfractibus 3–4, convexis, sutura sat profunda separatis, ultimo maximo, dimidium testæ efformante.

Tenuissima, corneo-albescens, limo inquinata.

Operculum subpellucidum, in apertura profunde situm, limo vel limi punctulis inquinatum.

Long. 1½–2, diam. 1¼ mill.

Hab. prope Nizza Maritimam.

This *Hydrobia* is nearly allied to the *Hydrobia gibba* (Drap.) which is found in such abundance at the source of the Lesz, near Montpellier, but it is distinguished from it by its less elon-

gated form, by its smaller number of whorls which are less convex and divided by a much shallower suture, by its last whorl more ventricose and never detached, by its mouth less rounded, more oblique and more angular, and by the presence of only one swelling behind the mouth, whereas in the *H. gibba* there are generally several in adult specimens.

I have found this *Hydrobia* in the stream below the mill of Davigo, and in a ditch at the Grenouillères, both of which are supplied from the Var, near Nice. They are attached to the underside of aquatic plants or the underside of stones, and are very plentiful.

The observations I have made on some of the *Pupæ* of the south of France induce me to believe that too much importance has been given to the teeth as a specific character in this genus. The *Pupa cinerea*, which is described as possessing six teeth, viz. two parietal, two columellar, and two palatal, and is considered as presenting no variety except in size, I find on the contrary with five, six, seven, and eight teeth. In the first case, one of the columellar teeth are wanting, and in the two latter there are either one or two additional teeth on the palate. One of the additional teeth, and the one most commonly found, is placed in the columellar angle of the palate, the other near the external angle. This latter, when present, is commonly indicated by a white line externally. These variations in the number of teeth are found both in the small and large varieties of *Pupa cinerea*, and as I have collected at least a dozen of each in this neighbourhood (Nice), they cannot be considered very rare.

The variety of *Pupa quadridens*, in which only three teeth exist, has been formed into a species under various names, as *P. Niso* of Risso, *P. seductilis* of Ziegler, *P. lunatica* of Jan, and yet, in the neighbourhood of Montpellier, I have found every shade of variety, from the four teeth of the type, insensibly passing through the three teeth of this false species to a still more imperfect variety with only two teeth. In like manner the addition of one or two supplemental teeth in the *Pupa secale* has given rise to the *Pupa Boileausiana* of De Charpentier, although I have specimens from Montpellier in which every step of the transition may be found. The same observation may be extended to *Pupa variabilis*, *P. muscorum*, *P. umbilicata*, and probably to many other species, in which the number of the teeth is very uncertain, and in which, therefore, as a specific character, they can only be adopted with great caution.

Another variety of *Pupa cinerea* common here, which I have not seen noticed, is marked by a red band running parallel to

the suture along the four last whorls. This band is in general very narrow; but in one specimen found by my son Oliver, in Vaucluse, the band is broad, and resembles that of the *Bulimus acutus*.

The large variety of the *Pupa cinerea* (length 15, diam. 5 mill.) is found here abundantly, and is distinguished not only by its size and form (it is more ventricose and fusiform than the smaller variety), but is also strongly and regularly striated. I have noticed some specimens of this *Pupa* truncated.

The large varieties of the *Pupa quadridens* (length 15, diam. 4 mill.) and *Pupa variabilis* (length 16, diam. 4 mill.) are common here, as in other parts of the Mediterranean coast.

I believe the presence of epidermic spines has not as yet been noticed in any *Pupæ*, yet they certainly do exist in the *Pupa doliolum* of Savoy, and probably of other countries. I found one adult and several young specimens behind the hotel called Grande Maison between Aiguebelle and St. Jean Maurienne. On the four or five upper whorls they are furnished with epidermic ribs terminating just above the suture, in short triangular spines (like those of *Helix ciliata*, though much shorter), forming a projection over the suture, and when fresh, especially if the dew is on them, very evident to the naked eye. I have not yet had an opportunity of comparing these specimens with others in a good condition, but Draparnaud speaks of "a torn appearance of the epidermis," and Rossmässler notices the epidermic ribs, so that I have little doubt the spines will be found too. My specimens are now six months old, but the spines are still very visible, although shrunk, as epidermic spines and ribs always will do on drying.

The *Planorbis cristatus* (Drap.), which is found in the ditches of the Grenouillères near Nice, abundantly, presents all the varieties which are described by authors under the names of *P. nautileus* and *P. imbricatus*. In some specimens the epidermic ribs are distant and well marked, and the spines in which they terminate on the keel very evident; in others the shell is more rounded, the ribs become more numerous, are little more than mere striæ, and the spines disappear altogether. These varieties pass into each other by every possible shade of transition. In adult specimens the peristome is continuous, and the mouth stands out quite separate from the penultimate whorl. In some cases the ribs and spines are not merely epidermic, but are marked on the substance of the shell itself.

All the species of *Planorbis*, and indeed most of the freshwater shells I have found in Nice, are much smaller than those of the South of France or Switzerland.

The *Cyclostoma elegans* of Nice often varies very considerably

from that of France, although it is like that found about Genoa, and probably in other parts of Italy. In adult shells the peristome is slightly cup-shaped and thickened, while the mouth stands out quite free from the penultimate whorl, as in the *Cyclos. sulcatum*, which is common at Marseilles, but is not found here. The operculum, although like that of the *elegans*, is placed at some distance within the aperture, as in the *sulcatum*. Notwithstanding these differences, which in some specimens are so strongly marked, that if observed alone they might induce one to form a new species, the transitions are in other cases so insensible from this to the common form that it can only be considered as a variety.

The *Valvata piscinalis*, both here and in Montpellier, has the peristome only subcontinuous.

The *Helix apicina* (Lamk.), which is very common at Nice, has always when young, and frequently when old too, a covering of short, weak, and very deciduous hairs. It is extraordinary that the Abbé Dupuy, who must have had the opportunity of seeing this *Helix* living, should not have observed this character. Rossmässler, whom nothing escapes, had only dead shells to consult, but he conjectures the existence of hairs from the marks on the shell, though he does not dare to form a character from them in his description.

The *Helix strigella* (Draparn.) is in like manner commonly described as without hairs, and Rossmässler speaks of it as "often with weak hairs which are very short and deciduous." I have never found a single young shell of this species that was not covered with hairs—very short—nor an adult which did not either still retain some, especially on the lower side, or in which the marks where they had been were not quite evident.

Another hairy shell, commonly deprived of its honours because not studied in a perfectly fresh state, is the *Helix rufescens* (Flem.), *montana* (Stud.). I collected it in considerable numbers near the Lac de Joux and the source of the Orbe in Switzerland, where De Charpentier indicates it, and I can still see on many of my specimens very numerous short and often reflexed hairs. When fresh they were still more evident.

The *Helix aperta* (Born), *naticoides* (Drap.), which is exceedingly common in the neighbourhood of Nice, and much esteemed by gourmands as a Lent dish, has not unfrequently its uniform colour interrupted by bands of a lighter tint. I have specimens in which these bands occupy the positions of all the different bands commonly seen in banded shells.

I do not make any observations on the varieties of the *Helix variabilis* and *Helix cespitum* of this neighbourhood, for I confess

they are so puzzling that I seek in vain for any character by which to distinguish or recognise them.

The *Helix splendida* of the South of France presents six pretty well-marked varieties. 1st. With broad black bands, called the variety of Provence. 2nd. With five narrow bands, which is generally considered as the type. 3rd. With the two inferior (4th and 5th) bands only perfect. 4th. With the fourth band only. 5th. With one white band only,—that which usually accompanies the 4th dark band, which in this variety is corneous and translucent. 6th. Without bands, but slightly flammulated. The third of these I found near the Pont du Gard, but all the rest are common in the neighbourhood of Montpellier.

The *H. nemoralis* is no longer found living near Montpellier, nor within fifty miles, but I discovered a considerable number of them imbedded in the alluvium behind the fortress, which, from their perfect condition, had evidently inhabited that place at some former period.

Nice, April 18th, 1854.

XLIII.—*Notices of British Fungi*. By the Rev. M. J. BERKELEY, M.A., F.L.S., and C. E. BROOME, Esq.

[Continued from p. 407.]

730. *Lycoperdon atropurpureum*, Vitt. Mon. p. 42. On exposed pastures. Leigh Down, near Bristol, C. E. Broome.

Peridium perfectly sessile or strongly stipitate, depressed or globose, greyish, when half-grown a little cracked in the centre into polygonal warts, the margin sprinkled with small stellate warts which give it a furfureous appearance; when mature dark brown with pale warts, opening irregularly; sometimes there are a few strong warts at the very base. Spores globose, $\cdot 00025$ – $\cdot 0003$ inch in diameter, strongly echinulate, capillitium purplish-brown, but sometimes the whole plant has a yellowish-olive tinge and the capillitium is similarly coloured.

In every stage of growth this is easily distinguished from the common puff-balls which it greatly resembles by its large echinulate spores.

731. *Badhamia nitens*, Berk. in Tr. Linn. Soc. xxi. p. 153. On decayed oak branches. Feb. 21, 1851, East Bergholt, Suffolk, Rev. Dr. Badham; Twycross, Rev. A. Bloxam.

732. *B. pallida*, Berk. *l. c.* On decayed oak branches. March 1, 1851, East Bergholt, Rev. Dr. Badham.

733. *B. fulvella*, Berk. *l. c.* p. 154. On dead wood. East Bergholt, Rev. Dr. Badham.